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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/021,403A

DATE: 07/30/2002

TIME: 14:49:52

Input Set : A:\EP.txt

Output Set: N:\CRF3\07302002\J021403A.raw

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3 <110> APPLICANT: Advisys
5 <120> TITLE OF INVENTION: Administration of Nucleic Acid Sequence to Female Animal to
Enhance
6      Growth in Offspring
8 <130> FILE REFERENCE: HO-P02021US1/100021476/OTA 00-91
10 <140> CURRENT APPLICATION NUMBER: 10/021,403A
11 <141> CURRENT FILING DATE: 2002-04-11
13 <150> PRIOR APPLICATION NUMBER: 60/255,021
14 <151> PRIOR FILING DATE: 2000-12-12
16 <160> NUMBER OF SEQ ID NOS: 11
18 <170> SOFTWARE: PatentIn version 3.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 40
22 <212> TYPE: PRT
23 <213> ORGANISM: artificial sequence
25 <220> FEATURE:
26 <223> OTHER INFORMATION: This amino acid sequence is an synthetic analog of "growth
hormon
27      e releasing hormone" ("GHRH").
29 <400> SEQUENCE: 1
31 Tyr Ala Asn Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Gly Gln
32 1      5      10      15
35 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg Gln Gln Gly
36      20      25      30
39 Glu Arg Asn Gln Glu Asn Gly Ala
40      35      40
43 <210> SEQ ID NO: 2
44 <211> LENGTH: 48
45 <212> TYPE: DNA
46 <213> ORGANISM: artificial sequence
48 <220> FEATURE:
49 <223> OTHER INFORMATION: This is a primer used for site directed mutagenesis of growth
hor
50      mone releasing hormone ("GHRH")
52 <400> SEQUENCE: 2
53 aggcagcagg gagagaggaa ccaagagcaa ggagcataat gactgcag
56 <210> SEQ ID NO: 3
57 <211> LENGTH: 42
58 <212> TYPE: DNA
59 <213> ORGANISM: artificial sequence
61 <220> FEATURE:
62 <223> OTHER INFORMATION: This is a primer used for site directed mutagenesis of growth
hor
63      mone releasing hormone ("GHRH")

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65 <400> SEQUENCE: 3
66 accctcagga tgcggcggca cgtagatgcc atcttcacca ac
69 <210> SEQ ID NO: 4

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70 <211> LENGTH: 27
 71 <212> TYPE: DNA
 72 <213> ORGANISM: artificial sequence
 74 <220> FEATURE:
 75 <223> OTHER INFORMATION: This is a primer used for site directed mutagenesis of growth

hor

76 mone releasing hormone ("GHRH")
 78 <400> SEQUENCE: 4
 79 cggaaggtgc tggccagct gtccgcc 27
 82 <210> SEQ ID NO: 5
 83 <211> LENGTH: 36
 84 <212> TYPE: DNA
 85 <213> ORGANISM: artificial sequence
 87 <220> FEATURE:
 88 <223> OTHER INFORMATION: This is a primer used for site directed mutagenesis of growth

hor

89 mone releasing hormone ("GHRH")
 91 <400> SEQUENCE: 5
 92 ctgctccagg acatcctgaa caggcagcag ggagag 36
 95 <210> SEQ ID NO: 6
 96 <211> LENGTH: 358
 97 <212> TYPE: DNA
 98 <213> ORGANISM: artificial sequence
 100 <220> FEATURE:
 101 <223> OTHER INFORMATION: This is a synthetic promoter, termed SPC5-12.
 103 <400> SEQUENCE: 6
 104 gagctccacc gcggtggcgg ccgtccgccc tcggcaccat cctcacgaca cccaaatatg 60
 106 gcgacgggtg aggaatggtg gggagttatt ttagagcgg tgaggaaggt gggcaggcag 120
 108 caggtgttg cgctctaaaa ataactcccc ggagttattt ttagagcggg ggaatggtg 180
 110 acacccaaat atggcgacgg ttcctcaccg gtcgccatat ttgggtgtcc gccctcggcc 240
 112 gggcgcccat tcttgggggc cggcggtg gcgcgccgc ctcgataaaa ggctccgggg 300
 114 ccggcgggcg cccacgagct acccgaggga gcgggaggcg ccaagctcta gaactagt 358
 117 <210> SEQ ID NO: 7
 118 <211> LENGTH: 623
 119 <212> TYPE: DNA
 120 <213> ORGANISM: artificial sequence
 122 <220> FEATURE:
 123 <223> OTHER INFORMATION: This is a human growth hormone ("hGH") 3' untranslated

region.

125 <400> SEQUENCE: 7
 126 ggtggcatt cctgtgacct ctccccagtg cctctcctgg ccctggaagt tgccactcca 60
 128 gtgcccacca gccttgctct aataaaatta agttgcatca ttttgtctga ctagggtgtcc 120
 130 ttctataata ttatgggggt gaggggggtg gtatggagca aggggcaagt tgggaagaca 180
 132 acctgtaggg cctgcggggg ctattgggaa ccaagctgga gtgcagtggc acaatcttgg 240
 134 ctactgcaa tctccgcctc ctgggttcaa gcgattctcc tgcctcagcc tcccaggttg 300
 136 ttgggattcc aggcattgcat gaccaggctc agctaatttt tgtttttttg gtagagacgg 360
 138 ggttttccca tattggccag gctggtctcc aaactccta ctcagggtgat ctaccacct 420
 140 tggcctccca aattgctggg attacaggcg tgaacctctg ctcccttccc tgtccttctg 480
 142 atttttaaat aactatacca gcaggaggac gtccagacac agcataggct acctggccat 540
 144 gcccaaccgg tgggacattt gagttgcttg cttggcactg tctctctatg cgttgggtcc 600
 146 actcagtaga tgctgttga att 623
 149 <210> SEQ ID NO: 8

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150 <211> LENGTH: 40
 151 <212> TYPE: PRT
 152 <213> ORGANISM: artificial sequence
 154 <220> FEATURE:
 155 <223> OTHER INFORMATION: This amino acid sequence is an synthetic analog of "growth
 hormon
 156 e releasing hormone" ("GHRH").
 158 <400> SEQUENCE: 8
 160 His Val Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Ala Gln
 161 1 5 10 15
 164 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Leu Asn Arg Gln Gln Gly
 165 20 25 30
 168 Glu Arg Asn Gln Glu Gln Gly Ala
 169 35 40
 172 <210> SEQ ID NO: 9
 173 <211> LENGTH: 3534
 174 <212> TYPE: DNA
 175 <213> ORGANISM: artificial sequence
 177 <220> FEATURE:
 178 <223> OTHER INFORMATION: This is a plasmid pSPC5-12-HVGHRH utilized in the present
 inventi
 179 on.
 181 <400> SEQUENCE: 9
 182 gttgtaaaaac gacggccagt gaattgtaat acgactcact atagggcgaa ttggagctcc 60
 184 accgcggttg cgcccgctcg cctcggcac catcctcacg acacccaaat atggcgacgg 120
 186 gtgaggaatg gtggggagtt atttttagag cggtgaggaa ggtgggcagg cagcaggtgt 180
 188 tggcgctcta aaaataactc ccgggagtta ttttttagagc ggaggaatgg tggacacca 240
 190 aatatggcga cgttccctca cccgtcgcca tatttggtg tccgccctcg gccggggccg 300
 192 cattcctggg ggccggggcg tgctcccgcc cgcctcgata aaaggctccg gggccggcg 360
 194 cggcccacga gctacccgga ggagcgggag gcgccaagct ctagaactag tggatcccaa 420
 196 ggcccacac cccgaaccac tcagggtcct gtggacagct cacctagctg ccatggtgct 480
 198 ctgggtgttc ttctttgtga tcctcaccct cagcaacagc tccactgct cccacctcc 540
 200 ccctttgacc ctccagatgc ggcgccagct agatgccatc ttcaccaaca gctaccgaa 600
 202 ggtgctggcc cagctgtccg cccgcaagct gctccaggac atcctgaaca ggcagcagg 660
 204 agagaggaac caagagcaag gagcataatg actgcaggaa ttcgatatca agcttatcgg 720
 206 ggtggcatcc ctgtgacccc tcccagtg cctctcctggc cctggaagtt gccactccag 780
 208 tgcccaccag ccttgctcta ataaaattaa gttgcatcat tttgtctgac taggtgtcct 840
 210 tctataatat tatgggggtg aggggggtg tatggagcaa ggggcaagtt gggagacaa 900
 212 cctgtagggc ctgcggggtc tattgggaac caagctggag tgcagtggca caatcttggc 960
 214 tcactgcaat ctccgcctcc tgggttcaag cgattctcct gcctcagcct cccgagttgt 1020
 216 tgggattcca ggcatgcatg accaggctca gctaattttt gtttttttgg tagagacgg 1080
 218 gtttcaccat attggccagg ctggtctcca actcctaatc tcaggtgatc taccacctt 1140
 220 ggccctccaa attgctggga ttacaggcgt gaaccactgc tcccttccct gtccttctga 1200
 222 ttttaaaata actataccag caggaggacg tccagacaca gcataggcta cctggccatg 1260
 224 cccaaccggt gggacatttg agttgcttgc ttggcactgt cctctcatgc gttgggtcca 1320
 226 ctcatgagat gcctgttgaa ttcgataccg tcgacctcga gggggggccc ggtaccagct 1380
 228 tttgttccct ttagtgaggg ttaatttcga gcttggcgta atcatggtca tagctgtttc 1440
 230 ctgtgtgaaa ttgttatccg ctcaaatc cacacaacat acgagccgga agcataaagt 1500
 232 gtaagcctg ggggtgcctaa tgagtgaagt aactcacatt aattgcgttg cgctcactgc 1560
 234 ccgctttcca gtcgggaaac ctgtcgtgcc agctgcatta atgaatcggc caacgcgcgg 1620
 236 ggagaggcgg tttgcgtatt gggcgctctt ccgcttccct gctcactgac tcgctgcgct 1680

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238 cggtcgttcg gctgcggcga gcggtatcag ctactcaaaa ggcggttaata cggttatcca 1740
240 cagaatcagg ggataacgca ggaaagaaca tgtgagcaaa aggccagcaa aaggccagga 1800
242 accgtaaaaa ggccgcgttg ctggcgtttt tccataggct ccgccccctt gacgagcatc 1860
244 acaaaaatcg acgctcaagt cagagggtgc gaaacccgac aggaactataa agataccagg 1920
246 cgtttccccc tggaagctcc ctcggtgcgt ctctgtttcc gaccctgccg cttaccggat 1980
248 acctgtccgc ctttctccct tcgggaagcg tggcgctttc tcatagctca cgctgtagg 2040
250 atctcagttc ggtgtaggtc gttcgctcca agctgggctg tgtgcacgaa cccccgctt 2100
252 agcccgaccg ctgcgcctta tccggttaact atcgctctga gtccaaccg gtaagacacg 2160
254 acttatcgcc actggcagca gccactggta acaggattag cagagcgagg tatgtaggcg 2220
256 gtgctacaga gttcttgaag tgggtggccta actacggcta cactagaaga acagtatttg 2280
258 gtatctgcgc tctgctgaag ccagttacct tcggaaaaag agttggtagc tcttgatccg 2340
260 gcaaaaaaac caccgctggt agcgggtggt tttttgtttg caagcagcag attacgcgca 2400
262 gaaaaaaagg atctcaagaa gatcctttga tctttcttac ggggtctgac gctcagaaga 2460
264 actcgtaag aaggcgatag aaggcgatgc gctgcgaatc gggagcggcg ataccgtaaa 2520
266 gcacgaggaa gcggtcagcc cattcgccgc caagctcttc agcaatatca cgggtagcca 2580
268 acgctatgtc ctgatagcgg tccgccacac ccagccggcc acagtcgatg aatccagaaa 2640
270 agcggccatt ttccaccatg atattcgcca agcaggcatc gccatgggtc acgacgagat 2700
272 cctcgccgct gggcatgcgc gccttgagcc tggcgaaacag ttcggctggc gcgagccctt 2760
274 gatgctcttc gtccagatca tctgatcga caagaccggc ttccatccga gtacgtgctc 2820
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278 gccgccgat tgcacagcc atgatggata ctttctcgcc aggagcaagg tgagatgaca 2940
280 ggagatcctg ccccgccact tcgcccaata gcagccagtc ccttcccgtc tcagtacaa 3000
282 cgtcgagcac agctgcgcaa ggaacgccc tctggtggcag ccacgatagc cgcgctgctt 3060
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286 cctgcgctga cagccggaac acggcgccat cagagcagcc gattgtctgt tgtgccag 3180
288 catagccgaa tagcctctcc acccaagcgg ccggagaacc tgcgtgcaat ccatcttgtt 3240
290 caatcatgag aaacgatcct catcctgtct cttgatcaga tcttgatccc ctgcgccatc 3300
292 agatccttgg cggcaagaaa gccatccagt ttactttgca gggcttccca acctaccag 3360
294 agggcgcccc agctggcaat tccggttcgc ttgctgtcca taaaaccgcc cagtctagca 3420
296 actggtggga agggcgatcg gtgcgggct cttcgctatt acgccagctg gcgaaagggg 3480
298 gatgtgctgc aaggcgatta agttgggtaa cgccagggtt ttcccagtcg cgac 3534

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301 <210> SEQ ID NO: 10

302 <211> LENGTH: 2192

303 <212> TYPE: DNA

304 <213> ORGANISM: artificial sequence

306 <220> FEATURE:

307 <223> OTHER INFORMATION: This is a plasmid vector comprising a pVC0289 backbone

309 <400> SEQUENCE: 10

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310 cgataccgtc gacctcgagg gggggcccg taccagcttt tgttcccttt agtgagggtt 60
312 aatttcgagc ttggcgtaat catggtcata gctgtttcct gtgtgaaatt gttatccgct 120
314 cacaattcca cacaacatac gagccggaag cataaagtgt aaagcctggg gtgcctaattg 180
316 agtgagctaa ctacatttaa ttgcgttgcy ctactgccc gctttccagt cgggaaacct 240
318 gtgcgtccag ctgcattaat gaatcgccca acgcgcgggg agaggcggtt tgcgtattgg 300
320 gcgctcttcc gcttctctgc tcaactgact gctgcgctcg gtcgttcggc tgcggcgagc 360
322 ggtatcagct cactcaagg cggtaatacy gttatccaca gaatcagggg ataacgcagg 420
324 aaagaacatg tgagcaaaa gccagcaaaa ggccaggaa cgtaaaaagg ccgcgttgct 480
326 ggcgtttttc cataggctcc gccccctga cgagcatcac aaaaatcgac gctcaagtca 540
328 gaggtggcga aaccgcagag gactataaag ataccaggcg tttccccctg gaagctccct 600
330 cgtgcgctct cctgttccga ccctgcgcgt taccggatac ctgtccgcct ttctcccttc 660

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332 gggaaagcgtg ggcgtttctc atagctcacg ctgtagggtat ctcagttcgg tgtagggtcgt 720
334 tcgctccaag ctgggctgtg tgcacgaacc ccccgttcag cccgaccgct gcgccttctc 780
336 cggtactat cgtcttgagt ccaacccggt aagacacgac ttatcgccac tggcagcagc 840
338 cactggtaac aggattagca gagcgaggta tgtaggcggt gctacagagt tcttgaagtg 900
340 gtggcctaac tacggctaca ctagaagaac agtatttggt atctgcgctc tgctgaagcc 960
342 agttaccttc ggaaaaagag ttggtagctc ttgatccggc aaacaaacca ccgctggtag 1020
344 cggtggtttt tttgtttgca agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga 1080
346 tcctttgata ttttctacgg ggtctgacgc tcagaagaac tcgtcaagaa ggcgatagaa 1140
348 ggcgatgcgc tgcgaatcgg gagcggcgat accgtaaagc acgaggaaagc ggtcagccca 1200
350 ttcgcccga agctcttcag caatatcacg ggtagccaac gctatgtcct gatagcggtc 1260
352 cgccacaccc agccggccac agtcgatgaa tccagaaaag cggccatttt ccaccatgat 1320
354 attcggcaag caggcatcgc catgggtcac gacgagatcc tcgccgtcgg gcctgcgcgc 1380
356 cttgagcctg gcgaacagtt cggctggcgc gagccctga tgccttcgt ccagatcatc 1440
358 ctgatcgaca agaccggctt ccatccgagt acgtgctcgc tcgatgcgat gtttcgcttg 1500
360 gtggtcgaat gggcaggtag ccgatcaag cgtatgcagc cgccgcatg catcagccat 1560
362 gatggatact ttctcggcag gagcaagggt agatgacagg agatcctgcc ccggcacttc 1620
364 gcccaatagc agccagtccc ttcccgttc agtgacaacg tcgagcacag ctgcgcaagg 1680
366 aacgcccgtc gtggccagcc acgatagccg cgctgcctcg tcctgcagtt cattcagggc 1740
368 accggacagg tcggtcttga caaaaagaac cgggcgcccc tcgctgaca gccggaacac 1800
370 ggcggcatca gagcagccga ttgtctgtt tgcccagtc tagccgaata gcctctccac 1860
372 ccaagcggcc ggagaacctg cgtgcaatcc atcttgttca atcatgcgaa acgatcctca 1920
374 tcctgtctct tgatcagatc ttgatccct gcgccatcag atccttggcg gcaagaaagc 1980
376 catccagttt actttgcagg gcttcccaac cttaccagag ggcgcccag ctggcaattc 2040
378 cggttcgctt gctgtccata aaaccgcccc gtctagcaac tgttggaag ggcgatcggg 2100
380 gcgggcctct tcgctattac gccagctggc gaaaggggga tgtgctgcaa ggcgattaag 2160
382 ttgggtaacg ccagggtttt ccagtcacg ac 2192

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385 <210> SEQ ID NO: 11

386 <211> LENGTH: 308

387 <212> TYPE: DNA

388 <213> ORGANISM: artificial sequence

390 <220> FEATURE:

391 <223> OTHER INFORMATION: This is a nucleic acid sequence is an synthetic analog of

"growth

392 hormone releasing hormone" ("GHRH").

394 <400> SEQUENCE: 11

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395 ggatcccaag gcccaactcc ccgaaccact cagggtcctg tggacagctc acctagctgc 60
397 catggtgctc tgggtgttct tctttgtgat cctcaccctc agcaacagct cccactgctc 120
399 cccacctccc cctttgacct tcaggatgcg gcggcacgta gatccatct tcaccaacag 180
401 ctaccggaag gtgctggccc agctgtccgc ccgcaagctg ctccaggaca tcctgaacag 240
403 gcagcaggga gagaggaacc aagagcaagg agcataatga ctgcaggaat tcgatatcaa 300
405 gcttatcg 308

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